

## Unit 5.6 Complex Fractions with Rational Expressions Practice

Period \_\_\_\_\_

**Simplify each expression.**

1) 
$$\frac{\frac{x}{3}}{\frac{9}{4}}$$

2) 
$$\frac{\frac{1}{u}}{\frac{u}{4}}$$

3) 
$$\frac{\frac{5}{y^2}}{\frac{5}{yx}}$$

4) 
$$\frac{\frac{y^2}{4}}{\frac{y}{x}}$$

5) 
$$\frac{\frac{u^2}{1}}{\frac{1}{4} + \frac{u^2}{4}}$$

6) 
$$\frac{\frac{3}{x^2}}{\frac{9}{x} + \frac{3}{x}}$$

7) 
$$\frac{\frac{u^2}{3}}{\frac{u}{5} + \frac{9}{5}}$$

8) 
$$\frac{\frac{5b}{a^2}}{\frac{25}{a^2} + \frac{a}{5}}$$

9) 
$$\frac{\frac{a}{2} - \frac{b^2}{a^2}}{\frac{b}{a^2}}$$

10) 
$$\frac{\frac{y}{x} + \frac{y^2}{4}}{\frac{y^2}{x}}$$

$$11) \frac{\frac{x^2}{3} + \frac{5}{4}}{\frac{3}{16} - \frac{25}{9}}$$

$$12) \frac{\frac{u^2}{16} + \frac{4}{3}}{\frac{3}{u} - \frac{1}{2}}$$

$$13) \frac{\frac{5}{3} - \frac{4}{a}}{\frac{25}{4} + \frac{1}{3}}$$

$$14) \frac{\frac{v}{3} - \frac{5}{u}}{\frac{u^2}{v^2} - \frac{v}{u}}$$

$$15) \frac{\frac{x}{5} + \frac{1}{y}}{\frac{y}{x^2} - \frac{1}{y}}$$

$$16) \frac{\frac{y^2}{2x} - \frac{1}{2}}{\frac{2y}{x^2} - \frac{2}{x}}$$

$$17) \frac{\frac{y-2}{x+5} + \frac{9}{x+5}}{\frac{y-2}{x+5}}$$

$$18) \frac{\frac{x+4}{y-1} + \frac{x+4}{3}}{\frac{x+4}{x+4} + \frac{x+4}{3}}$$

$$19) \frac{\frac{y-5}{5y-25} + \frac{y-5}{5}}{x-3}$$

$$20) \frac{\frac{y+3}{4} - \frac{4}{x+2}}{\frac{4}{x+2} + \frac{y+3}{x+2}}$$

$$21) \frac{\frac{b+5}{a+1} - \frac{25}{b+5}}{\frac{25}{a+1} - \frac{4}{a+1}}$$

$$22) \frac{\frac{x+1}{25} - \frac{x+1}{y+3}}{\frac{x+1}{5y+15} + \frac{x+1}{y+3}}$$